

# Made in Montana Marketing Fact Sheet



## UPC BARCODE BASICS

Retailers and Producers alike are taking advantage of barcode technology to save money and improve efficiency. Wholesale buyers often require products to have an associated barcode before purchasing the product for their inventory. This fact sheet will help you choose which type of barcode is best for you and will provide information on how to procure them.

### Types of Barcodes

There are several types of barcode families and each is designed for a different situation. Choosing a barcode depends on how it will be used and what industry you are in.

**EAN/UPC Family** (Universal Product Code): Included as part of product packaging and it is printed on virtually every consumer product around the globe. It is used in retail at point of sale (POS).

**DataBar**: Includes seven barcodes symbols; four are used at retail point-of-sale (POS) and three are used for general distribution and logistics tracking.

**One-dimensional (1D) barcodes**: Used exclusively in general distribution and logistics; enables items to be tracked through global supply chains.

**Two-dimensional (2D) barcodes**: Used in industries, from manufacturing and warehousing to logistics and healthcare; appear as square or rectangles containing small dots

### The UPC Barcode

UPC barcodes may look mysterious but they're actually easy to understand once you learn the basics.

Barcodes have two parts:

- The machine-readable bar code (the lines)
- Human-readable digits

A UPC barcode doesn't actually contain a price or any other identifiable information. It is merely a code (or lookup number) uniquely associated with a product and that number coincides with a record that the vendor has entered in a database. When the barcode is scanned, either with a machine optical reader or when a human keys in the digits, the computer uses the code to search for the matching information. Each particular product will need its own barcode even if it is just a different size.

### How to Buy a UPC Barcodes

You can get UPC barcodes in two different ways: 1) purchase barcodes directly from the organization that regulates them (GS1 US) or, 2) buy them online from a secondary seller.

### GS1 US

In the USA, the non-profit organization, GS1 US ([Uwww.gs1us.org](http://www.gs1us.org)), has overall responsibility for distributing barcodes. To receive them your company must pay to join and in exchange the company is assigned its own unique identification number. This number is used as the first part of every item's unique 11-digit number. With that in place, the company can then build many unique and authentic UPC barcode numbers for their various products. The current cost of membership is \$250 plus annual renewal fees of at

### Barcode Byte

UPC barcodes work everywhere that either UPC or EAN bar codes are scanned which includes the United States, Mexico, Canada, Australia, the UK, Asia, South America and the Middle East

- **UPC Version A** (12 digits) - standard in the USA
- **UPC version E** (8 digits) - assigned when label space is at a premium
- **ISBN-13** barcodes - found on books, based on ISBN numbers
- **ISSN symbols** - non-U.S. periodicals.
- **EAN-13 and EAN-8** - used in Europe
- **JAN-13 and JAN-8** - used in Japan

least \$50. The fee depends on the number of unique products needed to identify, and the company's gross annual sales revenue.

GS1 US also publishes barcode specifications and printing guidelines. For step-by-step instructions on how to implement barcodes for your company go to ([https://www.gs1.org/sites/default/files/ten\\_steps\\_to\\_barcode\\_implementation.pdf](https://www.gs1.org/sites/default/files/ten_steps_to_barcode_implementation.pdf)).

## SECONDARY SELLERS

If you only need a few UPC barcodes it may be more cost effective to purchase them from secondary sellers on the internet. Basically, you are paying them for the use of their GS1 6-digit company identification number. This doesn't work if you are selling to large retailers as most of them require uniquely assigned GS1 UPC barcodes.

You can easily find these secondary sellers by doing an internet search.

## READING A GS1 UPC BARCODE OR NUMBER

The first six digits of the UPC number (see UPC barcode below) – 92771, is the assigned **company prefix**. The next five digits -- 98104 -- are the **item number**. The manufacturer is responsible for assigning item numbers to products, making sure the same code is not used on more than one product, retiring codes as products are removed from the product line, etc.

In general, every item the manufacturer sells, as well as every size package and every repackaging of the item, needs a different item code. So, a 12-ounce can of soda needs a different item number than a 16-ounce bottle of soda, as does a 6-pack of 12-ounce cans, a 12-pack, a 24-can case, and so on. It is the job of the manufacturer to keep these numbers straight.

The last digit of the UPC code is called a **check digit** and is based on the previous 11 digits. This digit lets the scanner determine if it scanned the number correctly or not. If the check digit it calculates is different from the check digit it reads, the scanner knows that something went wrong and the item needs to be rescanned.



### NUMBER SYSTEM CHARACTER.

The first digit of the manufacturer's identification number has special meanings.

0 – Standard UPC number (must be used for zero-suppressed bar codes)	5 – Coupons
1 – Reserved	6 – Standard UPC number
2 – Random-weight items (fruit, vegetables, meats, etc.)	7 – Standard UPC number
3 – Pharmaceuticals	8 – Reserved
4 – In-store marking for retailers	9 – Reserved